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10/766,928	01/30/2004	Toshiyuki Fukuoka	1359.1087	3959
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STAAS & HALSEY LLP			TERMANINI, SAMIR	
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1201 NEW YORK AVENUE, N.W.			ART UNIT	PAPER NUMBER
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			05/16/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/766,928	FUKUOKA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Samir Termanini	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 07 May 2008.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-17 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_.

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## **DETAILED ACTION**

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### **BACKGROUNDS**

1. This Non-Final Office Action is responsive to the following communications: Request for Continued Examination (R.C.E.) filed on 2/19/2008.
2. Claims 1-17 are pending. Claims 1, and 15-17 are independent in form. Applicant as Amended Claims 1 and 15-17.

### **INFORMATION DISCLOSURE STATEMENT**

- 3.. The information disclosure statement (IDS) filed on 5/7/2008 has been acknowledged and considered by the examiner. The Initial copy of form PTO-1449 is included in this office action.

### **RESPONSE TO AMENDMENT**

4. The Rejections previously made under 35 U.S.C. §102(b) of claims 1-17, for being anticipated by *Barbara Hayes-Roth* are being maintained.

### **CLAIM REJECTIONS - 35 USC § 102**

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1–17** are rejected under 35 U.S.C. 102(b) as being anticipated by *Barbara Hayes-Roth et al.* (US 2002/0005865 A1).

### I. Citation of Prior Art

A reference to specific paragraphs, columns, pages, or figures in a cited prior art reference is not limited to preferred embodiments or any specific examples<sup>1</sup>. It is well settled that a prior art reference, in its entirety, must be considered for all that it expressly teaches and fairly suggests to one having ordinary skill in the art<sup>2</sup>. Stated differently, a prior art disclosure reading on a limitation of Applicant's claim cannot be ignored on the ground that other embodiments disclosed were instead cited. Therefore, the Examiner's citation to a specific portion of a single prior art reference is not intended to exclusively dictate, but rather, to demonstrate an exemplary disclosure commensurate with the specific limitations being addressed.

### II. General Discussion of the Applied Prior Art.

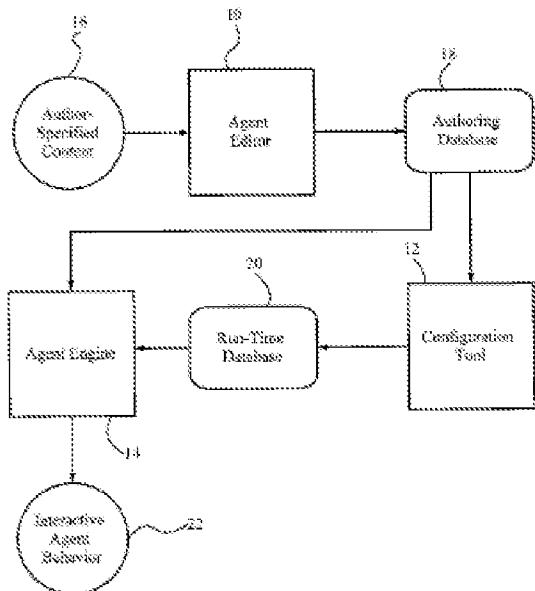
*Barbara Hayes-Roth* discloses methods for authoring the content of a computer-controlled agent by identifying a potential agent context to an author; receiving content

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<sup>1</sup> *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968).

<sup>2</sup> *Upsher-Smith Labs. v. Pamlab, LLC*, 412 F.3d 1319, 1323, 75 USPQ2d 1213, 1215 (Fed. Cir. 2005); *In re Fritch*, 972 F.2d 1260, 1264, 23 USPQ2d 1780, 1782 (Fed. Cir. 1992); *Merck & Co. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir. 1989); *In re Fracalossi*, 681 F.2d

in context for the agent; and storing the content such that it can be accessed by a run-time agent. *Barbara Hayes-Roth* teaches the agent to be a run-time agent which uses content to control its behavior in an actual matching context. *Barbara Hayes-Roth* use a graphical user interface for allowing an author to enter content without having any technical understanding of the run-time engine or the system's computer code. *Barbara Hayes-Roth* show an agent in the context of interacting with a user through dialogues and gestures that are context sensitive. *Barbara Hayes-Roth* does teach that their agent responds to user questions differently when in different moods, "and the agent's moods change in response to user statements or actions the agent performs." (see *Barbara Hayes-Roth*, Abstract)(emphasis added). For clearness, Fig. 1 is reproduced below:



III. Prior Art Anticipation of Claimed Limitations.

7. **Claims 1–16** are rejected under 35 U.S.C. 102(b) as being anticipated by *Barbara Hayes-Roth* (US 2002/0005865 A1).

As to independent **claim 1**, *Barbara Hayes-Roth* describe(s): A dialog control system, comprising: an input that interprets input information input by a user ("...receiving from the author content ...," para. [0012]); a dialog agent that changes a state in accordance with the input information changes acceptable input information which the dialog agent is capable of accepting in accordance with the change in the state ("A given actual context of an agent matches a given potential context of the agent if a value of a state variable in the given actual context matches a value of a corresponding state variable in the given potential context.," para. [0043]) , and makes a response; and ("...dialogue delivered by the agent...," para. [0012]); and a dialog control part placed between the dialog agent and the input part ("...actual context that occurs during operation of the agent and that matches the potential context...," para. [0012]), for identifying a plurality of the dialog agents ("...agents...," para. [0003]), transmits the input information to the dialog agent to request a response to the input information ("...what the Imp Character will say in response...," para. [0064]), and transmits a response from the dialog agent to an output part ("...Character will respond with the related piece of dialog...," para. [0078]), wherein, when the input information is input ("...USER INPUT...," para. [0045]), the dialog control part is notified of acceptable input information indicating input information which each of the dialog

agents is capable of accepting in each state from the plurality of the dialog agents, ("...track and store various items of information...," para. [0144]), matches the input information with the acceptable input information ("...Examples of Matches between Actual Contexts and Potential Contexts of the Agent Izzy...," para. [0061]), selects the dialog agent capable of processing the input information ("...processing unit...," para. [0390]), and transmits the input information to the selected dialog agent to receive a response thereto ("...an internal event or state of the agent, or an input from a different computer-controlled process...," para. [0013]).

As to dependent **claim 2**, which depends from claim 1, *Barbara Hayes-Roth* further disclose(s): The dialog control system according to claim 1, wherein the dialog control part previously stores identification information of the dialog agents and selection priority of the dialog agents so that the identification information is associated with the selection priority ("...what is stored in a database from a previous interaction...," para. [0128]), refers to the dialog agents in a decreasing order of the selection priority when referring to the input information and the processable information ("...Log cues are preconditions that are used to help catalog behaviors and topics of interest as they occur in real interactions...," para. [0129]), and transmits the input information to the first selected dialog agent to request a response to the input information ("...receiving from the author content for the agent in the potential context...," para. [0012]).

As to dependent **claim 3**, which depends from claim 2, *Barbara Hayes-Roth* further disclose(s): The dialog control system according to claim 2, wherein the dialog

control part accumulates identification information of the dialog agent selected as a transmission destination of the input information ("...be identified by the user or for the user..." para. [0013]), refers to the first stored dialog agent when selecting the subsequent dialog agent ("...storing..." para. [0012]), in a case where the stored dialog agent is capable of processing the input information ("...processing unit..." para. [0390]), transmits the input information to the stored dialog agent to request a response to the input information, and in a case where the stored dialog agent is not capable of processing the input information ("...uses the content to control the behavior of the agent in an actual context that occurs during operation of the agent and that matches the potential context..." para. [0012]), refers to the dialog agents in a decreasing order of the selection priority ("...decrease) in the agent's mood or user's assumed mood by a specified qualitative magnitude..." para. [0386]).

As to dependent **claim 4**, which depends from claim 2, *Barbara Hayes-Roth* further disclose(s): The dialog control system according to claim 2, wherein the selection priority of the dialog agent is automatically updated in accordance with a use frequency of the dialog agent ("...wording [f]requency ..." para. [0178]).

As to dependent **claim 5**, which depends from claim 3, *Barbara Hayes-Roth* further disclose(s): The dialog control system according to claim 3, wherein the selection priority of the dialog agent is automatically updated in accordance with a use frequency ("...one that remembers one-word answers and another that remembers two-word answers of the dialog agent (the two-word pattern should be more important than the one word pattern)....," para. [0377]).

As to dependent **claim 6**, which depends from claim 2, *Barbara Hayes-Roth* further disclose(s): The dialog control system according to claim 2, wherein, in the dialog control part ("...computer-controlled agent..." para. [0012]), the control agents to be referred to are narrowed in accordance with contents of the input information ("...narrow it down further..." para. [0273]), and the narrowed dialog agents are referred to in a decreasing order of the selection priority ("...generic help response ..." para. [0273]).

As to dependent **claim 7**, which depends from claim 3, *Barbara Hayes-Roth* further disclose(s): The dialog control system according to claim 3, wherein, in the dialog control part ("...Natural Language Generation ..." para. [0078]), the control agents to be referred to are narrowed in accordance with contents of the input information ("...narrow it down further..." para. [0273]), and the narrowed dialog agents are referred to in a decreasing order of the selection priority ("...decrease) in the agent's mood or user's assumed mood by a specified qualitative magnitude..." para. [0386]).

As to dependent **claim 8**, which depends from claim 4, *Barbara Hayes-Roth* further disclose(s): The dialog control system according to claim 4, wherein, in the dialog control part ("...Natural Language Generation ..." para. [0078]), the control agents to be referred to are narrowed in accordance with contents of the input information ("...narrow it down further..." para. [0273]), and the narrowed dialog agents are referred to in a decreasing order of the selection priority ("...weighted at

178,507 while the Ecstatic line would be weighted at 849,347, so the Ecstatic line would be about 5 times more likely to be selected...," para. [0113]).

As to dependent **claim 9**, which depends from claim 1, *Barbara Hayes-Roth* further disclose(s): The dialog control system according to claim 1, wherein the dialog control part stores the identification information of the dialog agent determined to be available based on the processable information on a basis of the dialog agents ("...identifies a potential context of an agent to an author, receives input from the author, and stores the content in a database...," para. [0064]), and the dialog control part inquires about the processable information with respect to only the dialog agent determined to be available ("...If two lines of dialog for Happy and Ecstatic were available, the Happy line in this case would be weighted at 178,507 ...," para. [0113]).

As to dependent **claim 10**, which depends from claim 2, *Barbara Hayes-Roth* further disclose(s): The dialog control system according to claim 2, wherein the dialog control part includes a user information input part for inputting information for identifying a user ("...identifying to an author a potential context of the agent...," para. [0012]), stores input information for identifying the user and information on a state using the dialog agent including the selection priority on a user basis ("...storing the content such that it can be accessed by a run-time system that uses the content to control the behavior of the agent in an actual context that occurs during operation of the agent and that matches the potential context...," para. [0012]), and performs processing in accordance with the selection priority on a user basis ("...178,507 while the Ecstatic line would be weighted at 849,347, so the Ecstatic line would be about 5

times more likely to be selected. These numbers change depending on what was selected on the Specificity Scaler. If Most Specific Only is selected, the ImpEngine will only select the line with the greatest specificity..." para. [0113]).

As to dependent **claim 11**, which depends from claim 3, *Barbara Hayes-Roth* further disclose(s): The dialog control system according to claim 3, wherein the dialog control part includes a user information input part for inputting information for identifying a user ("...identifying to an author a potential context of the agent..." para. [0012]), stores input information for identifying the user and information on a state using the dialog agent including the selection priority on a user basis ("...178,507 while the Ecstatic line would be weighted at 849,347, so the Ecstatic line would be about 5 times more likely to be selected..." para. [0113]), and performs processing in accordance with the selection priority on a user basis ("...These numbers change depending on what was selected on the Specificity Scaler. If Most Specific Only is selected, the ImpEngine will only select the line with the greatest specificity..." para. [0113]).

As to dependent **claim 12**, which depends from claim 4, *Barbara Hayes-Roth* further disclose(s): The dialog control system according to claim 4, wherein the dialog control part includes a user information input part for inputting information for identifying a user ("...identifying to an author a potential context of the agent..." para. [0012]), stores input information for identifying the user and information on a state using the dialog agent including the selection priority on a user basis ("...178,507 while the Ecstatic line would be weighted at 849,347, so the Ecstatic line would be about 5 times more likely to be selected..." para. [0113]), and performs processing in accordance

with the selection priority on a user basis ("...These numbers change depending on what was selected on the Specificity Scaler. If Most Specific Only is selected, the ImpEngine will only select the line with the greatest specificity..." para. [0113]).

As to dependent **claim 13**, which depends from claim 5, *Barbara Hayes-Roth* further disclose(s): The dialog control system according to claim 5, wherein the dialog control part includes a user information input part for inputting information for identifying a user ("...identifying to an author a potential context of the agent..." para. [0012]), stores input information for identifying the user and information on a state using the dialog agent including the selection priority on a user basis ("...178,507 while the Ecstatic line would be weighted at 849,347, so the Ecstatic line would be about 5 times more likely to be selected..." para. [0113]), and performs processing in accordance with the selection priority on a user basis ("...These numbers change depending on what was selected on the Specificity Scaler. If Most Specific Only is selected, the ImpEngine will only select the line with the greatest specificity..." para. [0113]).

As to dependent **claim 14**, which depends from claim 6, *Barbara Hayes-Roth* further disclose(s): The dialog control system according to claim 6, wherein the dialog control part includes a user information input part for inputting information for identifying a user ("...identifying to an author a potential context of the agent..." para. [0012]), stores input information for identifying the user and information on a state using the dialog agent including the selection priority on a user basis ("... stores the content in a database..." para. [0064]), and performs processing in accordance with the selection priority on a user basis ("...weighted at 178,507 while the Ecstatic line would

be weighted at 849,347, so the Ecstatic line would be about 5 times more likely to be selected...." para. [0113]).

As to independent **claim 15**, *Barbara Hayes-Roth* describe(s): A dialog control method, comprising: inquiring about processable information with respect to a plurality of dialog agents making responses corresponding to input information ("...an agent Izzy based on values of two state variables, IZZY MOOD and USER INPUT..." para. [0045]), and storing obtained processable information ("...stores the content in a database..." para. [0064]); interpreting input information input by a user ("...USER INPUT..." para. [0045]); matching the input information with the acceptable input information ("...agent matches a given potential context of the agent if a value of a state variable in the given actual context matches a value of a corresponding state variable in the given potential context..." para. [0043]), selecting the dialog agent capable of processing the input information, and transmits the input information to the selected dialog agent to request a response to the input information ("...the character will "see" the longer keyword, and respond..." para. [0148]); and receiving the response from the dialog agent and outputting it .

As to independent **claim 16**, *Barbara Hayes-Roth* describe(s): A program product storing a program on a recording medium, the program allowing a computer to execute the operations of: inquiring about processable information with respect to a plurality of dialog agents making responses corresponding to input information ("...identifies a potential context of an agent to an author..." para. [0064]), and storing obtained processable information ("...the content information ..." para. [0038]); interpreting

input information input by a user ("...to recognize a wide variety of keywords and patterns..." para. [0144]); matching the input information with the acceptable input information ("...Examples of Matches between Actual Contexts and Potential Contexts of the Agent Izzy 3 AC1 matches PC1 - - - PC3 - - - AC2 matches - - - PC2 PC3 - - - AC3 matches..." para. [0061]), selecting the dialog agent capable of processing the input information ("...The entered content is stored in an authoring database 18, which is processed ..." para. [0388]), and transmits the input information to the selected dialog agent to request a response to the input information ("...the character will "see" the longer keyword, and respond..." para. [0148]); and receiving the response from the dialog agent and outputting it ("...Creating responses ..." para. [0009]).

As to independent **claim 17**, *Barbara Hayes-Roth* describe(s): a method comprising, querying a plurality of dialog agents ("...agents..." para. [0003]), to determine what input parameters each dialog agent requires and storing the input parameters ("...identifies a potential context of an agent to an author, receives input from the author, and stores the content in a database..." para. [0064]); receiving input from a user("...USER INPUT..." para. [0045]); matching the input with the input parameters required by each dialog agent and transmits the input when the input matches the input parameters of a dialog agent ("...actual context that occurs during operation of the agent and that matches the potential context..." para. [0012]); and receiving output from the dialog agent and transmits the output to the user ("...Character will respond with the related piece of dialog..." para. [0078]).

## RESPONSE TO ARGUMENTS

8. Applicant arguments, see pp. 7-9 filed 2/19/2008, with respect to the 35 U.S.C. §102 Rejections cited by the Examiner in the previous Office Action (Mail dated: 9/19/2007), have been fully considered but are not persuasive. Therefore, the rejection(s) have been maintained.

Applicant argues:

Independent claims 1 recites "In contrast, claim 1 recites "a dialog agent that changes a state in accordance with the input information, [and] changes acceptable input information which the dialog agent is capable of accepting in accordance with the change in the state" at lines 3-5<sup>3</sup>

In reply, the examiner respectfully makes the following points:

*Barbara Hayes-Roth* teaches:

[0040] A context of an agent is a combination of a plurality of alternative values for each of a plurality of state variables of the agent, where the values of the state variables co-occur, either simultaneously or in sequence, during an operation of the agent.

[0043] A given actual context of an agent matches a given potential context of the agent if a value of a state variable in the given actual context matches a value of a corresponding state variable in the given potential context.

[0064] Typically, the invention is implemented with many more potential contexts based on more than two state variables.

In response to Applicant's argument that nothing has been cited in HayesRoth that meets the definition of "processable information":

Applicant argues:

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<sup>3</sup> Remarks at pp. 7, filed 2/19/2008

nothing was cited in Hayes-Roth that describes a "plurality of dialog agents" (line 3)

In reply, the examiner respectfully points to the following teachings:

dialog agent[s are] determined to be available based on the processable information on a basis of the dialog agents, and the dialog control part inquires about the processable information with respect to only the dialog agent determined to be available<sup>4</sup>

Additionally, Applicant describes the *plurality of dialog agents*:

When the input information is input, the dialog control part is notified of acceptable input information indicating input information which each of the dialog agents is capable of accepting in each state from the plurality of the dialog agents, , matches the input information with the acceptable input information, selects the dialog agent capable of processing the input information, and transmits the input information to the selected dialog agent to receive a response thereto.

Most importantly, Applicant explains that, "the dialog control part 303 notifies an output part 302 of the response processing results in the selected dialog agent 304."<sup>5</sup>

These teachings indicated that the Agent in *Barbara Hayes-Roth* is the more akin to applicants *dialog control part*. And that the plurality of dialog agents are the "actual context of an *agent* matches a given potential context of the agent if a value of a state variable in the given actual context matches a value of a corresponding state variable in the given potential context." (*Barbara Hayes-Roth* para. [0043]) (emphasis added).

Therefore, *Barbara Hayes-Roth* does actually teach the "plurality of dialog agents." That is, each piece of related dialog that a character will respond with is a dialog agent. ("When a user's input matches a piece of NLU, the Imp Character will

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<sup>4</sup> Para 0014 of Applicants published Application.(emphasis added).

<sup>5</sup> para 0049 of Applicants published Application.

respond with the related piece of dialog. This is Natural Language Generation (NLG). A piece of dialog is an example of authored content," para. [0078])(emphasis added).

## CONCLUSION

9. All prior art made of record in this Office Action or as cited on form PTO-892 notwithstanding being relied upon, is considered pertinent to applicant's disclosure. Therefore, Applicant is required under 37 CFR §1.111(c) to consider these references fully when responding to this Office Action.

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Samir Termanini at telephone number is (571) 270-1047. The Examiner can normally be reached from 9 A.M. to 6 P.M., Monday through Friday.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Stephen S. Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Samir Termanini/  
Examiner, Art Unit 2178

/Stephen S. Hong/  
Supervisory Patent Examiner, Art Unit  
2178